

REPORT ON MACHINERY.

No. 23648

Port of GlasgowNo. in Survey held at Glasgow Irvine & Co
Reg. Book. S.S. Sheila
on theDate first Survey 21st Aug 05 Last Survey 14th March 1906
(Number of Visits)Received at London Office JUN 27 MAR 1906

Master By whom built Asa Shipbuilding Co (Ltd) Tons { Gross 1906 Net 1906
Engines made at Irvine By whom made Renfrew Bros & Co when made 1906
Boilers made at Govan By whom made Amesbury Burnett & Co when made 1906
Registered Horse Power 90 Owners G. A. Smith Port belonging to Irvine
Nom. Horse Power as per Section 28 90 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Compound Surface Condensing No. of Cylinders 4 No. of Cranks 2
Dia. of Cylinders 18" x 40" Length of Stroke 27 Revs. per minute 90 Dia. of Screw shaft 8 1/2" Material of screw shaft Iron
Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight
in the propeller boss Yes If the liner is in more than one length are the joints burned Yes If the liner does not fit tightly at the part
between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes If two
liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 34 1/2"
Dia. of Tunnel shaft as per rule Dia. of Crank shaft journals as per rule Dia. of Crank pin 8 1/4" Size of Crank webs 15 x 5 1/2" Dia. of thrust shaft under
collars 8 1/4" Dia. of screw 9-6" Pitch of screw 12-6" No. of blades 4 State whether moveable No Total surface 34 sq. ft.
No. of Feed pumps 2 Diameter of ditto 2 1/2" Stroke 13 1/2" Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto 3" Stroke 13 1/2" Can one be overhauled while the other is at work Yes
No. of Donkey Engines One Sizes of Pumps 7 1/2 x 4 1/2 x 10 Duplex No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room Two 2" diameter In Holds, &c. Two 2" diameter

No. of bilge injections 1 sizes 4" Connected to condenser, or to circulating pump Yes Is a separate donkey suction fitted in Engine room & size Yes, 2 1/2"
Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible Yes
Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both
Are they fixed sufficiently high on the ship's side to be seen without lifting the stowhold plates Yes Are the discharge pipes above or below the deep water line Above
Are they each fitted with a discharge valve always accessible on the plating of the vessel Yes Are the blow off cocks fitted with a spigot and brass covering plate Yes
What pipes are carried through the bunkers Peak & Hold How are they protected Hard boxing
Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times Yes
Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges Yes
When were stern tube, propeller, screw shaft, and all connections examined in dry dock Before launch Is the screw shaft tunnel watertight None
Is it fitted with a watertight door Yes worked from Yes

BOILERS, &c.—No. of Certificate 7750 (Letter for record S) Total Heating Surface of Boilers 1645 Is forced draft fitted No
No. and Description of Boilers One, Single Ended Working Pressure 130 lbs Tested by hydraulic pressure to 260 lbs
Date of test 24/2/06 Can each boiler be worked separately Yes Area of fire grate in each boiler 53 No. and Description of safety valves to
each boiler Two direct spring Area of each valve 7.07 sq. ft. Pressure to which they are adjusted 135 lbs Are they fitted with easing gear Yes
Smallest distance between boilers or uptakes and bunkers or woodwork 4'-0" Mean dia. of boilers 13' 6" Length 10' 0" Material of shell plates Steel
Thickness 7/8" Range of tensile strength 28 to 32 tons Are they welded or flanged No Descrip. of riveting: cir. seams Double riv. long. seams Double riv. straps
Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 6" x 3" Lap of plates or width of butt straps 11 3/4" x 7/8" x 13/16"
Per centages of strength of longitudinal joint: rivets 84.4 Working pressure of shell by rules 131 lbs Size of manhole in shell 12 x 16
Size of compensating ring M. Nils Flanged No. and Description of Furnaces in each boiler Three plain Material Steel Outside diameter 40"
Length of plain part top 7' 5" Thickness of plates crown 5/8" Description of longitudinal joint Welded No. of strengthening rings Aug 6 at bottom
Working pressure of furnace by the rules 140 lbs Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 9/16" Top 19/32" Bottom 9/16"
Pitch of stays to ditto: Sides 8 x 10 Back 8 1/2 x 9 Top 8 x 11 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 135 lbs
Material of stays Steel Section 1.45" Area supported by each stay 88" Working pressure by rules 131 lbs End plates in steam space:
Material Steel Thickness 1 1/16" Pitch of stays 10" x 20" How are stays secured Jack nuts Working pressure by rules 140 lbs Material of stays Steel
Diameter at smallest part 5.26" Area supported by each stay 380" Working pressure by rules 138 lbs Material of Front plates at bottom Steel
Thickness 3/4" Material of Lower back plate Steel Thickness 1 1/16" Greatest pitch of stays 12 1/2" Working pressure of plate by rules 130 lbs
Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" Material of tube plates Steel Thickness: Front 3/4" Back 23/32" Mean pitch of stays 11 1/4"
Pitch across wide water spaces 1' 2 1/4" Working pressures by rules 146 lbs Girders to Chamber tops: Material Steel Depth and
thickness of girder at centre 8" Length as per rule 27 7/8" Distance apart 11" Number and pitch of Stays in each Iron at 8"
Working pressure by rules 156 lbs Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked
separately Yes Diameter 11" Length 11' Thickness of shell plates 3/4" Material Steel Description of longitudinal joint Welded Diam. of rivet
holes 1 1/8" Pitch of rivets 6" Working pressure of shell by rules 131 lbs Diameter of flue 11" Material of flue plates Steel Thickness 3/4"
If stiffened with rings Yes Distance between rings 11" Working pressure by rules 131 lbs End plates: Thickness 1 1/2" How stayed By stays
Working pressure of end plates 131 lbs Area of safety valves to superheater 131 lbs Are they fitted with easing gear Yes

WASS-0034

DONKEY BOILER—

No. *None* Description *✓*

Made at _____ By whom made _____ Date of test _____ Where fixed _____
 Working pressure _____ tested by hydraulic pressure to _____ No. of Certificate _____ Fire grate area _____ Description of safety valves _____
 No. of safety valves _____ Area of each _____ Pressure to which they are adjusted _____ If fitted with easing gear _____ If steam from main boilers can
 enter the donkey boiler _____ Dia. of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____ Range of tensile
 strength _____ Descrip. of riveting long. seams _____ Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____
 Lap of plating _____ Per centage of strength of joint _____ Rivets _____ Thickness of shell crown plates _____ Radius of do. _____ No. of Stays to do. _____
 Dia. of stays _____ Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of
 joint _____ Thickness of furnace crown plates _____ Stayed by _____ Working pressure of shell by rules _____
 Working pressure of furnace by rules _____ Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____

SPARE GEAR. State the articles supplied:— *Two top and two bottom end bolts & nuts, two main
 bearing bolts & nuts, one set of coupling bolts & nuts, one set of feed and
 bilge pump valves, one propeller, assorted bolts & nuts and a few bars
 iron, one set of air & circulating pump valves, one main & one donkey check valve
 Condenser tubes etc.*

The foregoing is a correct description,

Raymond B. H. C.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - - 1905 Aug 21 Sep 7 19 Oct 9 23 29 28 Nov 2 10 16 24 29 Dec 4 6 11 12
 { During erection on board vessel - - - 13 20 28 29 1906 Jan 4 8 11 16 26 Feb 8 12 20 21 26 28 Mar 2 8 14
 Total No. of visits _____ Is the approved plan of main boiler forwarded herewith *Yes.*

General Remarks (State quality of workmanship, opinions as to class, &c.)

*The machinery of this vessel
 has been built under special survey, the materials and workmanship
 are of good quality, it has been securely fitted on board and a
 full speed satisfactory trial run.*

*The machinery of this vessel is now in our opinion eligible
 for record of *L.M.C. 3.06* (in red) in register book.*

Boiler plan & forging report attached.

*It is submitted that
 this vessel is eligible for*

THE RECORD *L.M.C. 3.06*

*Recd.
 28.3.06*

The amount of Entry Fee. . . £ *13* : *13* : _____ When applied for, *26 MAR 1906*
 Special . . . £ *13* : *13* : _____
 Donkey Boiler Fee . . . £ _____ : _____ : _____ When received, *8/5/06*
 Travelling Expenses (if any) £ *2* : *17* : _____

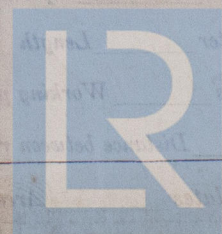
Committee's Minute

Glasgow 26 MAR 1906

Assigned

+ *L.M.C. 3.06*

MACHINERY CERTIFICATE
 WRITTEN 27.3.06



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Foundation